Physics Today 2  
PHYS 123-A (1)  
Spring 2016  
Wednesdays, 3:30pm-5:20pm  
CW144

Instructors
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Course Objective:
The objective of this course is to familiarize you with some of the recent advances and research areas in physics, and to make you better prepared and informed to be a physicist in the future.

Prerequisite(s):
This class is a continuation of PHYS 122. This is a K-State First Seminar and is reserved for freshman and incoming transfer students only. The student learning outcomes for this class are below:

Critical Thinking: Students will see the application of physics concepts to current research, and problem solving.
Communication: Students will develop communication skills, verbally through group collaboration, oral presentations, and written assignments.
Community Building: Through use of group projects, students will develop teamwork. The small class size will encourage stronger interaction with faculty and instructors.
Application of Learning: Students will use the concepts learned to develop computer programs, and apply to other relevant physics assignments.

Course Activities:
The class will be comprised of the following sections:

1. Introduction to the Physics Department at K-State
   You will be introduced to some of the cutting-edge research in physics at K-State. During many class meetings there will be a presentation by a K-State faculty member discussing her/his research. You are expected to participate by asking questions and engaging in any discussion or activities that the speaker has planned. The schedule for the research talks will be placed on the K-State Online course webpage. A maximum 1-page typed summary of each presentation will be due on Wednesday of the following week. These will be submitted online in K-State Online.
2. Computational Skills
Computational skills are essential to modern-day physicists and are also highly valued among potential employers in industry, research labs and academia. You will learn basic programming skills, using C/C++.

3. Oral Presentation
You will practice oral communication skills, by giving a presentation to your peers. Presentations will be done in groups. Topic to be decided.

4. Additional Assignments
Multiple assignments will be given throughout the class and will be announced appropriately.

Grade Distribution:

<table>
<thead>
<tr>
<th>Grade Distribution</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Attendance</td>
<td>20%</td>
</tr>
<tr>
<td>Presentation Summaries</td>
<td>10%</td>
</tr>
<tr>
<td>Programming</td>
<td>30%</td>
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<tr>
<td>Projects and Assignments</td>
<td>40%</td>
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Course Outline:

The weekly schedule will usually include a faculty research presentation. The remainder of the class will be used for one of the many assignments and projects given throughout the class. If you finish an assignment early, you may use the remainder of the time to work on other academic assignments. You may not leave class early, unless allowed by the instructor. If an assignment is not completed in class, this must be completed as homework.

This class prides itself in flexibility and will be open to small changes or suggestions. We reserve the right to make changes depending on timing, class interest and availability of presenters.

Course Policies:

- **General**
  - No use of cellphones will be permitted.
  - Computers are to be used for academic purposes only.

- **Grades**
  - Grades for Research Presentation summaries will be graded on a complete/incomplete system. If a paper is deemed unsatisfactory, you will be asked to rewrite and resubmit. You will be allowed to drop one write-up.
– Programming assignments will be graded on a complete/incomplete system. You will be allowed to drop one programming assignment.
– All grades will be posted on K-State Online and will be updated regularly.

• Attendance and Absences
– Attendance is expected and will be taken each class. If you miss more than 4 classes during the semester, you will be given an F in the class.
– Students are responsible for all missed work, regardless of the reason for absence.

• Disabilities
Students with disabilities who need classroom accommodations, access to technology, or information about emergency building/campus evacuation processes should contact the Student Access Center (http://www.k-state.edu/accesscenter/) and/or their instructor. Services are available to students with a wide range of disabilities including, but not limited to, physical disabilities, medical conditions, learning disabilities, attention deficit disorder, depression, and anxiety.

Academic Honesty Policy:
Students are expected to work independently. Offering and accepting solutions from others is an act of plagiarism, which is a serious offense and all involved parties will be penalized according to the Academic Honesty Policy. Discussion amongst students is encouraged, but when in doubt, direct your questions to the instructor.

KSU has a Honor System based on personal integrity, which is presumed to be sufficient assurance that, in academic matters, one’s work is performed honestly and without unauthorized assistance. Undergraduate and graduate students, by registration, acknowledge the jurisdiction of the Honor System. The policies and procedures of the Honor System apply to all full and part-time students enrolled in undergraduate and graduate courses on-campus, off-campus, and via distance learning. The honor system website can be reached at http://www.k-state.edu/honor. A component vital to the Honor System is the inclusion of the Honor Pledge which applies to all assignments, examinations, or other course work undertaken by students. The Honor Pledge is implied, whether or not it is stated: "On my honor, as a student, I have neither given nor received unauthorized aid on this academic work." A grade of XF can result from a breach of academic honesty. The F indicates failure in the course; the X indicates the reason is an Honor Pledge violation.